

**WHAT IS CLAIMED IS**

1. A fabric interconnect for use to interconnect a garment having fabric electrodes and an electronics enclosure having a conductive area on its outer surface that is  
5 connected to a circuit, said fabric interconnect comprising:

a portion of the garment including

a first inner surface, which is substantially electrically conductive, coupled to the fabric electrodes; and

a second inner surface that is substantially electrically non-conductive,

10 wherein the first inner surface and the second inner surface are seamlessly manufactured to form a chamber, and wherein when the electronics enclosure is inserted into the chamber in a predetermined position, causes the conductive area of the electronics enclosure and the first inner surface to make contact and form an interconnection between the fabric electrodes of the garment and the circuit.

15

2. The fabric interconnect of claim 1, wherein a force is applied to the chamber to position the electronics enclosure to the predetermined position.

3. The fabric interconnect of claim 1, wherein a force is applied to the  
20 electronics enclosure to position the electronics enclosure to the predetermined position.

4. The fabric interconnect of claim 1, wherein the first and second inner surfaces are flexible.

5. The fabric interconnect of claim 1, wherein the first and second inner surfaces are elastic.

6. The fabric interconnect of claim 1, wherein the chamber has a tube-like shape.

7. The fabric interconnect of claim 3, wherein the force is a rotating force.

8. The fabric interconnect of claim 3, wherein the force is an insertion or retraction force between the electronics enclosure and the seamless chamber.

9. The fabric interconnect of claim 1, wherein the first inner surface is a plurality of first inner surfaces, the second inner surface is a plurality of second inner surfaces and each of the plurality of first inner surface is aligned with one of the plurality of second inner surfaces.

10. The fabric interconnect of claim 1, wherein the electronics enclosure is a portion of a Heart Rate Monitor.

11. An electronics enclosure for use with a fabric interconnect in a garment having fabric electrodes, said electronics enclosure comprising:  
a casing including a substantially electrically conductive area; and  
a circuit coupled to the conductive area,  
wherein the conductive area is configured to be inserted into a seamless chamber of

the fabric interconnect, in a predetermined position, and causes the conductive area of the electronics enclosure and a conductive inner surface of the seamless chamber of the fabric interconnect to make contact and form an interconnection between the fabric electrodes of the garment and the circuit.

5           12.     The electronics enclosure of claim 10, further including an indicator to indicate a functionality of the electronics enclosure.

          13.     The electronics enclosure of claim 10, wherein the indicator is a display.

          14.     The electronics enclosure of claim 10, wherein the electrically conductive  
10     area is a plurality of electrically conductive areas, and further including a plurality of electrically non-conductive areas on the casing and each of the plurality of electrically conductive areas is aligned with one of the plurality of electrically non-conductive areas.

          15.     The electronics enclosure of claim 13, wherein the functionality of the  
15     electronics enclosure corresponds to a predetermined position in the seamless chamber.

          16.     The electronics enclosure of claim 15, wherein conductive inner surface of  
the seamless chamber is a plurality conductive inner surfaces, and the seamless chamber  
further includes a plurality of non-conductive inner surfaces and each of the plurality of  
20     conductive inner surface is aligned with one of the plurality of non-conductive inner  
surface.

          17.     The electronics enclosure of claim 15, wherein the functionality of the  
electronics enclosure corresponds to a predetermined number of conductive inner surfaces  
of the seamless chamber in contact with predetermined number of electrically conductive  
25     areas of the electronics enclosure.